

# Validation of CALIPSO Lidar Observations Using Data From the NASA Langley Airborne High Spectral Resolution Lidar



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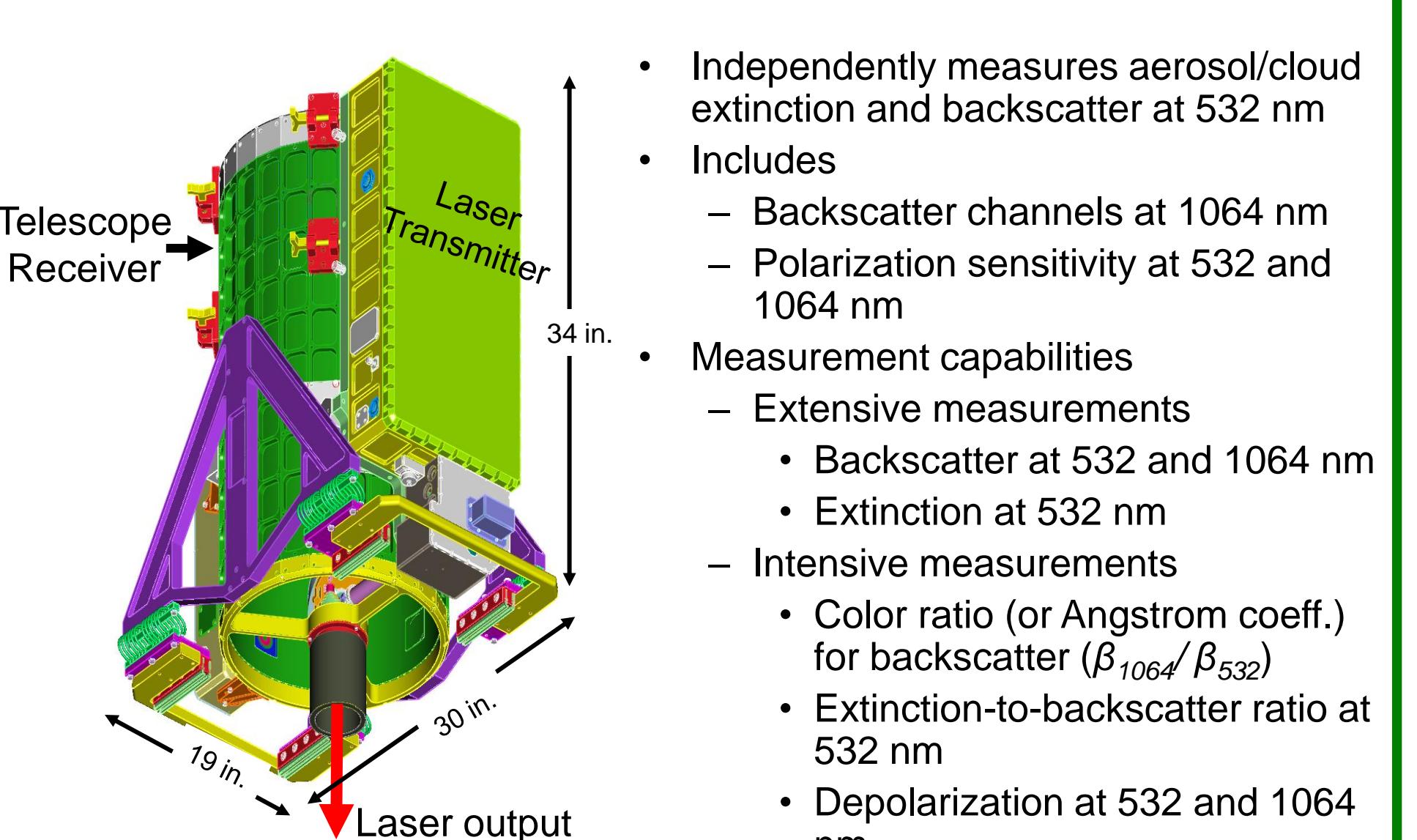
## Overview

This poster focuses on preliminary comparisons of data from the Cloud-Aerosol Lidar with Orthogonal Polarization (CALIOP) instrument on the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) spacecraft with data acquired by the NASA Langley Airborne High Spectral Resolution Lidar (HSRL). A series of 20 aircraft validation flights was conducted from 14 June through 27 September 2006, under both day and night lighting conditions and a variety of aerosol and cloud conditions. This poster presents comparisons of CALIOP measurements of attenuated backscatter at 532 and 1064 nm and depolarization at 532 nm with near coincident measurements from the Airborne HSRL as a preliminary assessment of CALIOP calibration accuracy.

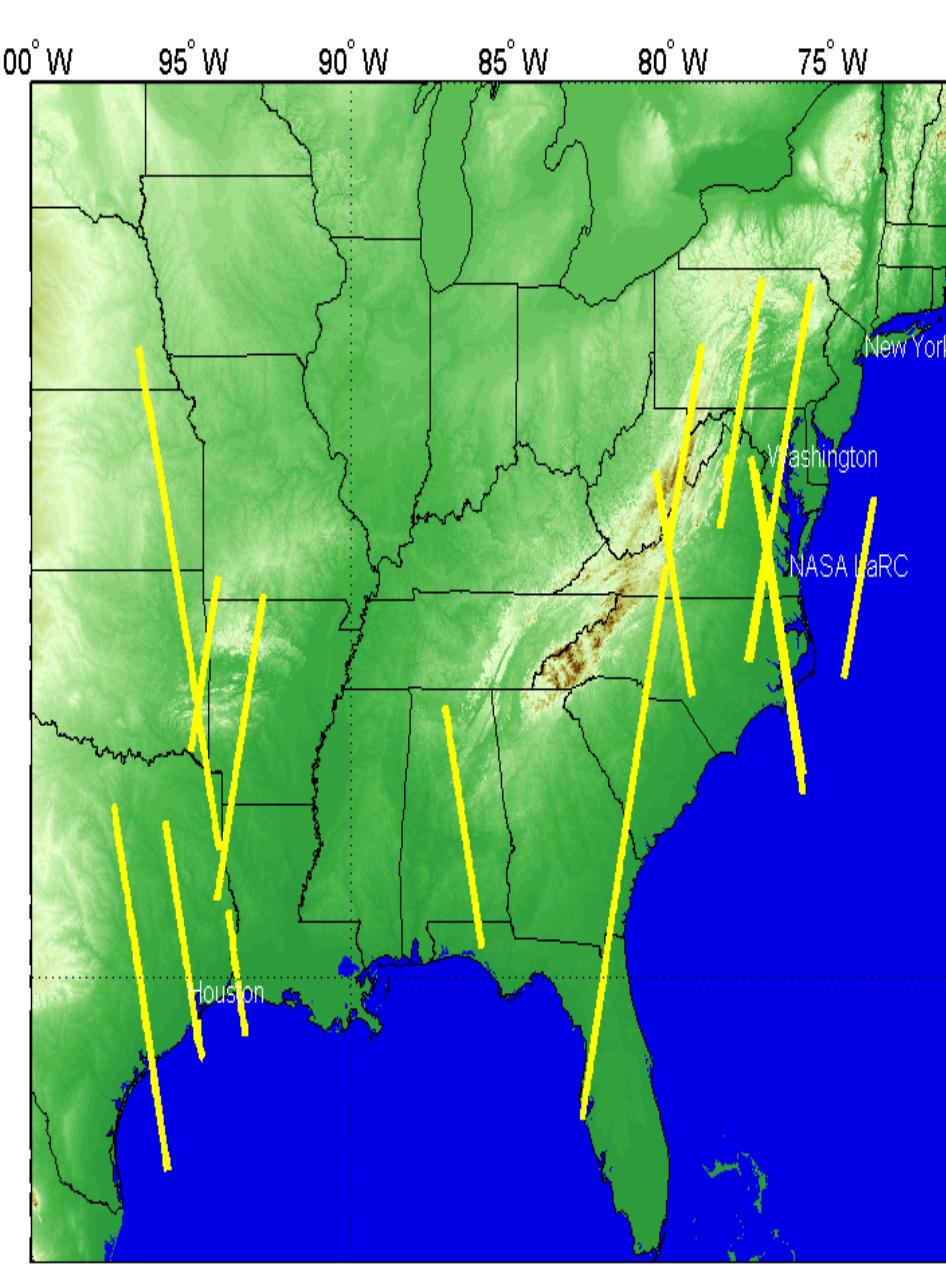
Note that the CALIOP data presented here are the *pre-release* version. These data have known artifacts in calibration which have been corrected in the December 8 CALIPSO data release which was not available at the time the comparisons were conducted for this poster. The HSRL data are also preliminary. No artifacts are known to exist; however, refinements in calibration and algorithms are likely to be implemented before validation comparisons are made final.

We gratefully acknowledge funding support from NASA SMD and the CALIPSO Project and aircraft operations support from NASA Langley Flight Research Services Directorate.

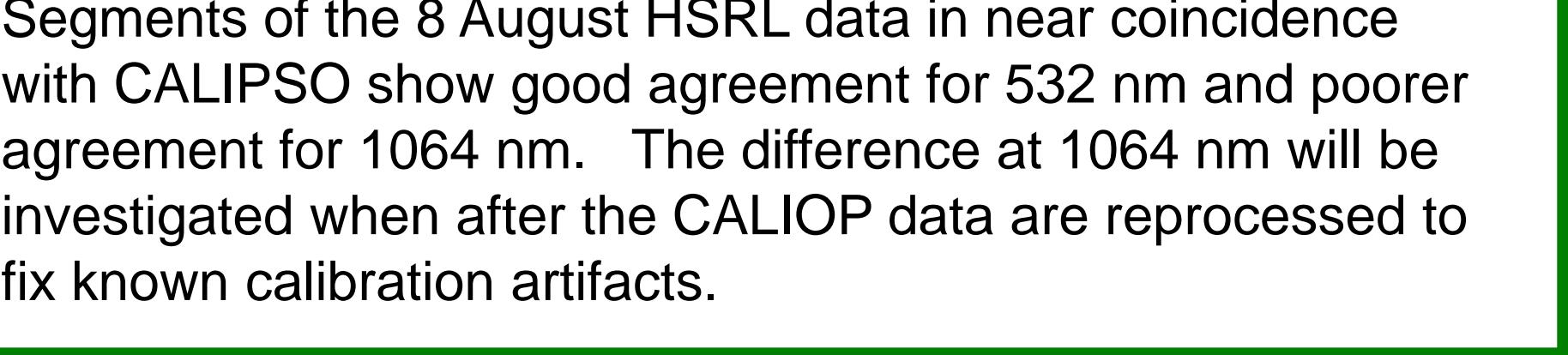
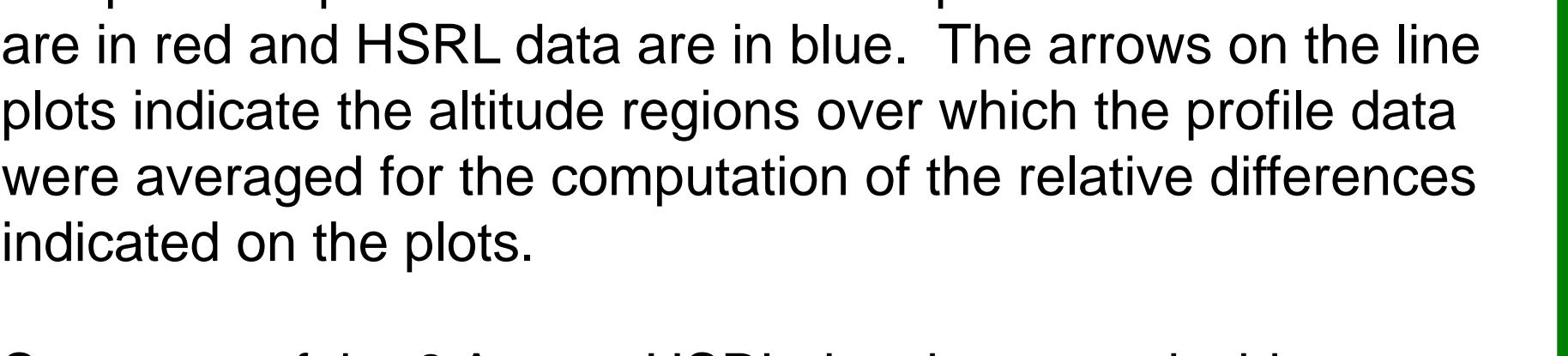
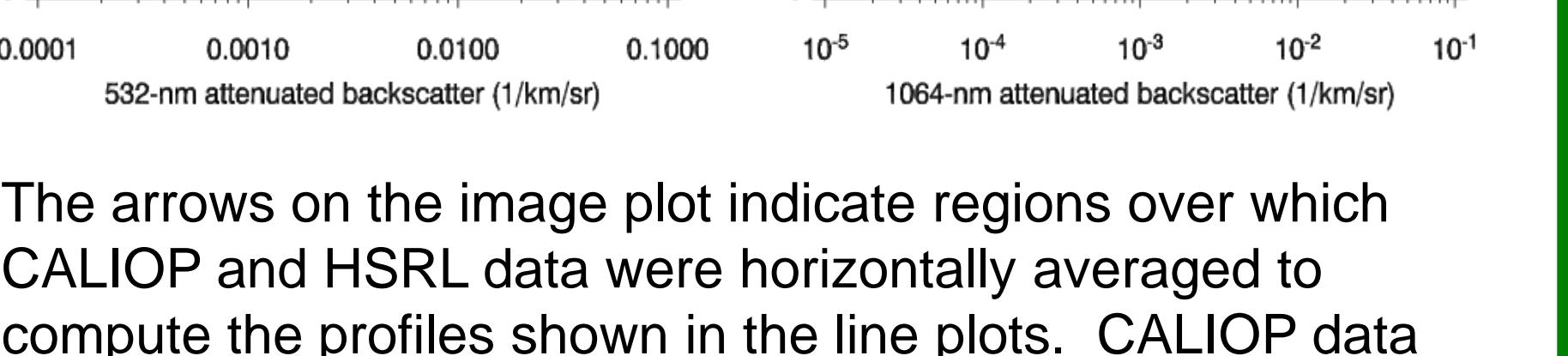
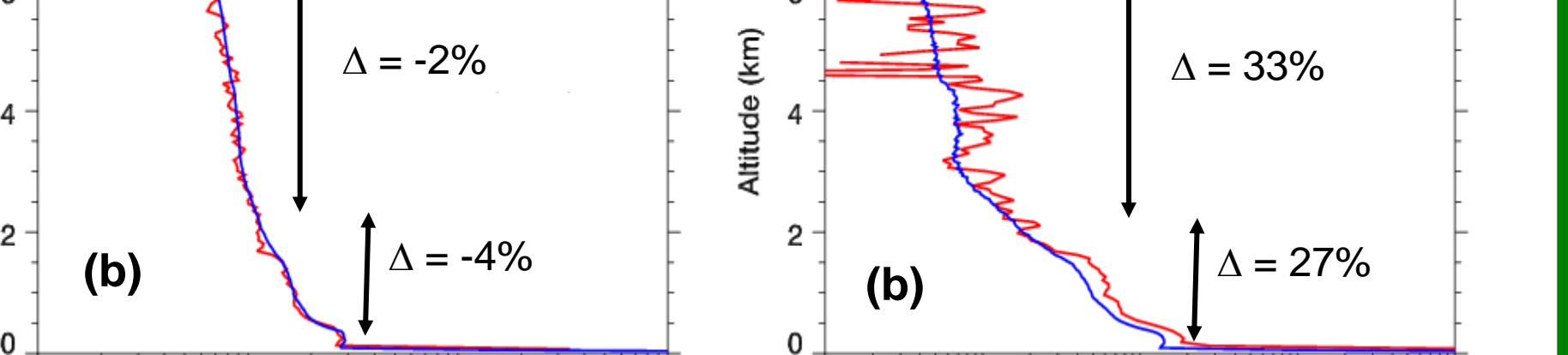
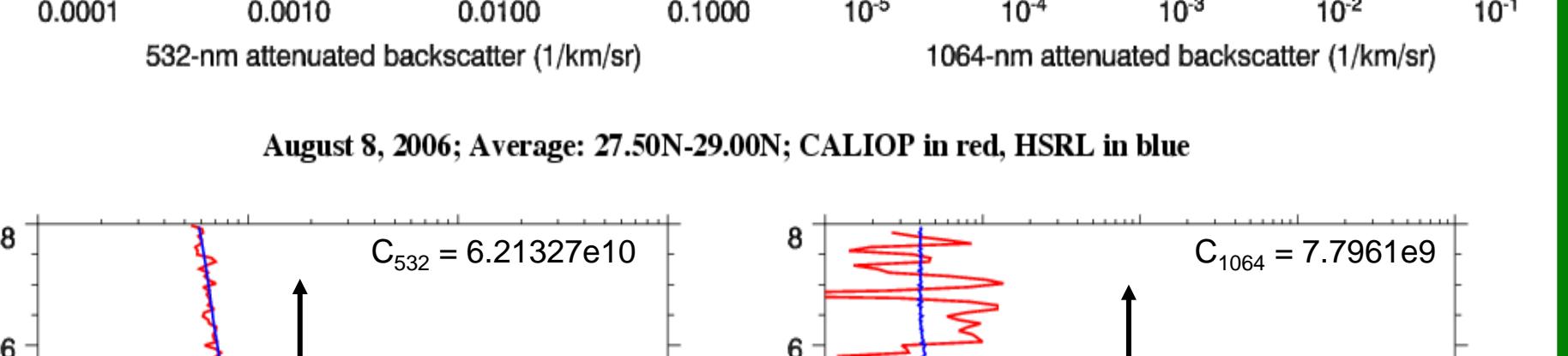
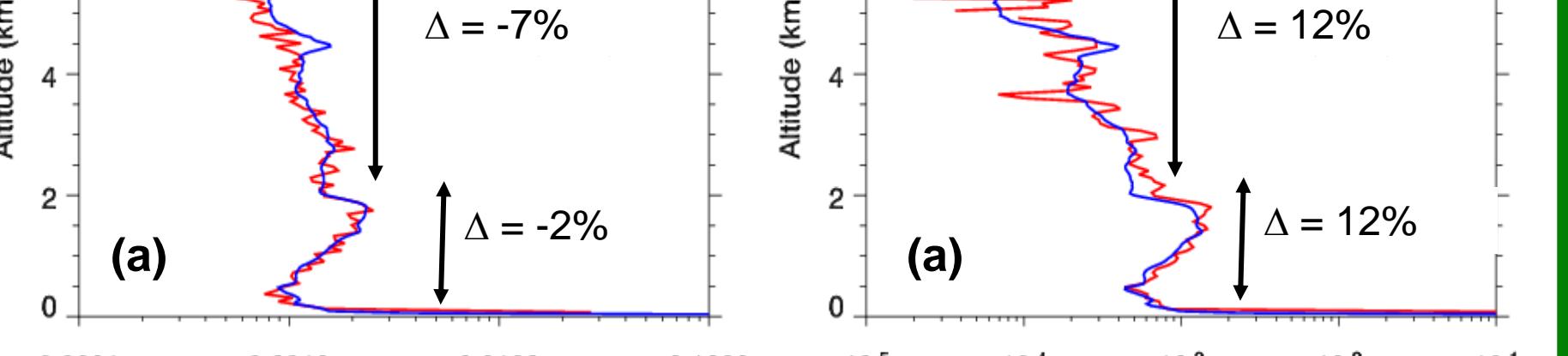
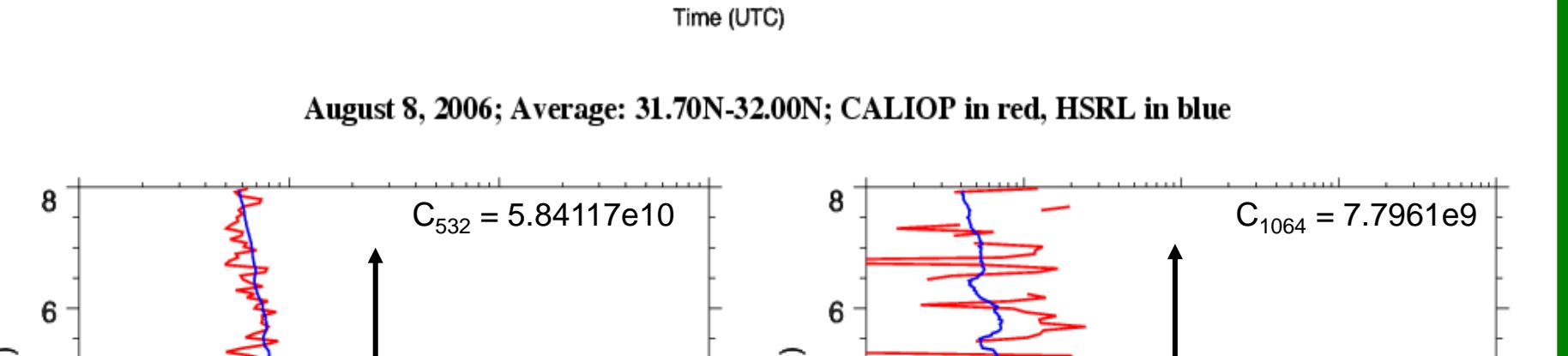
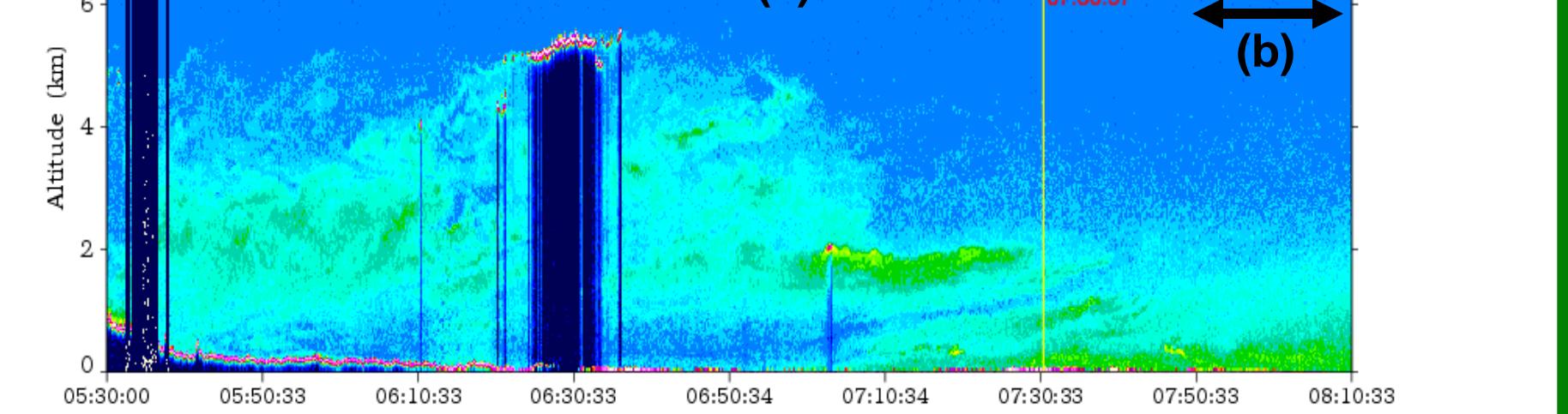
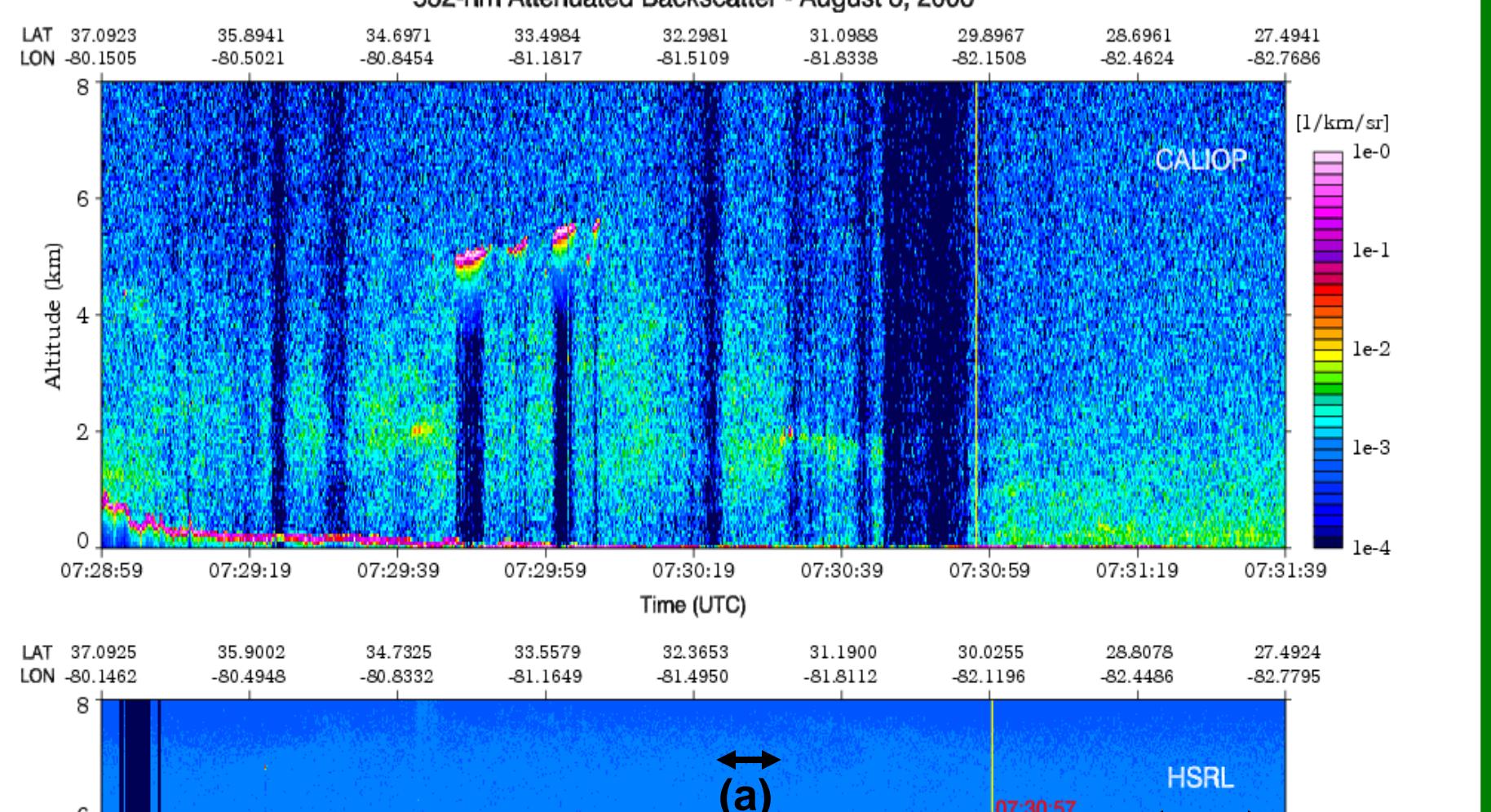
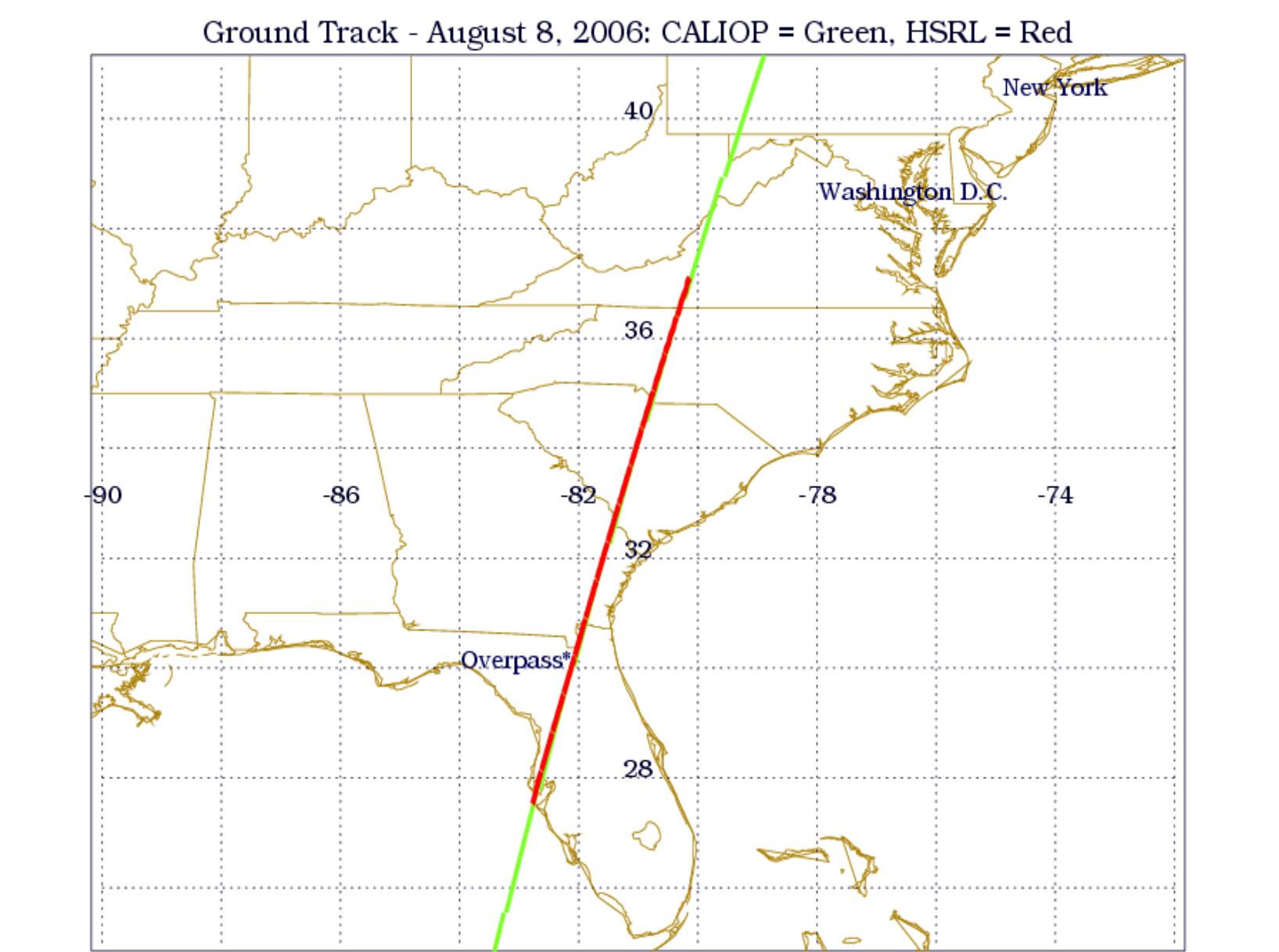
## Airborne High Spectral Resolution Lidar



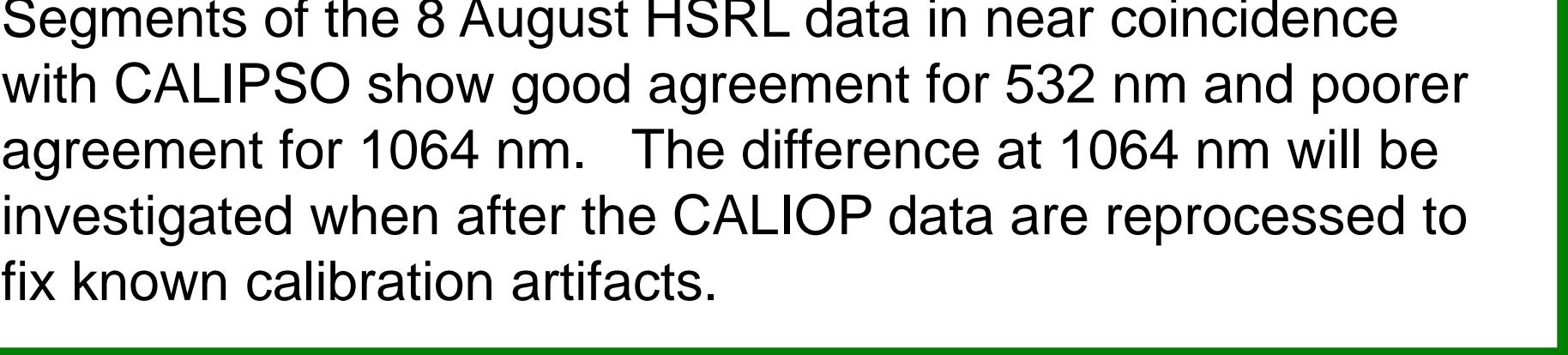
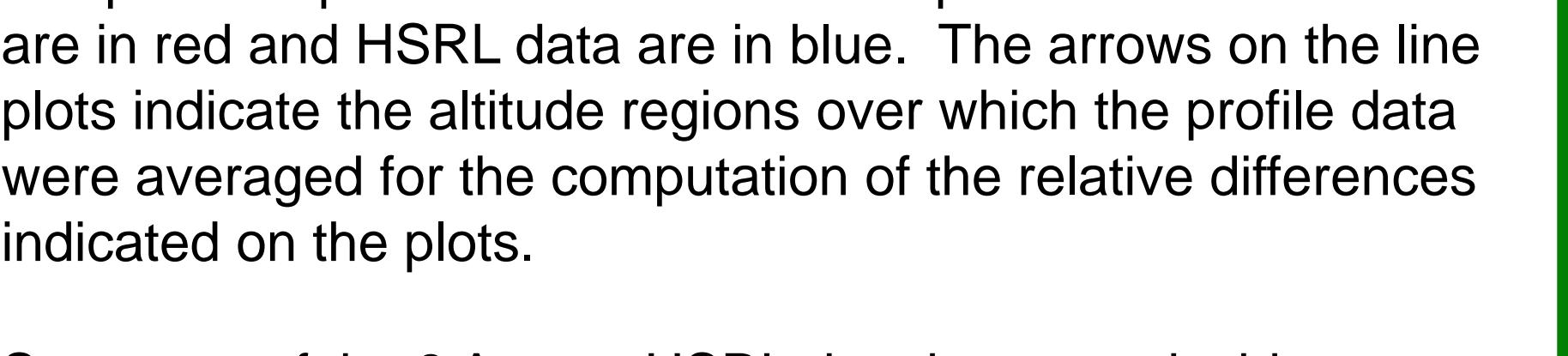
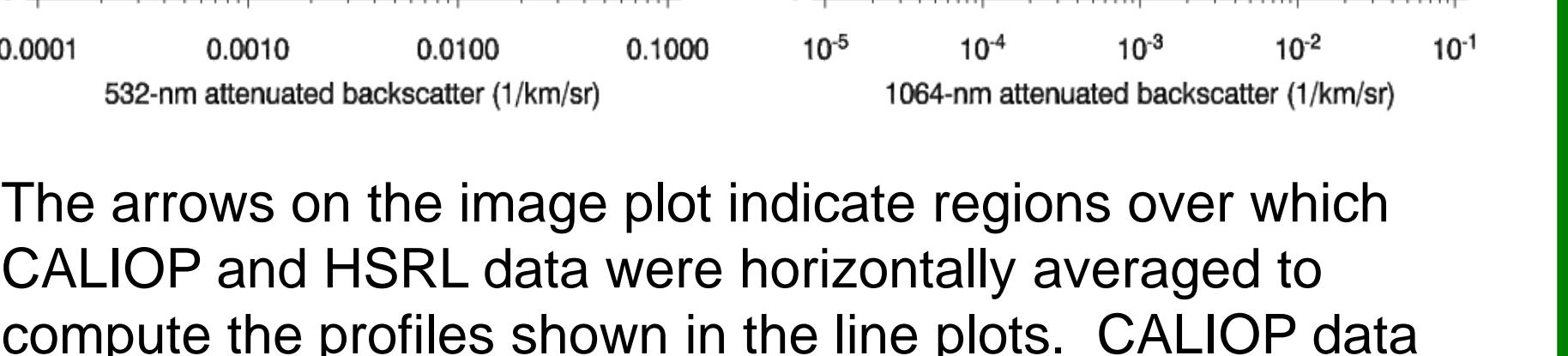
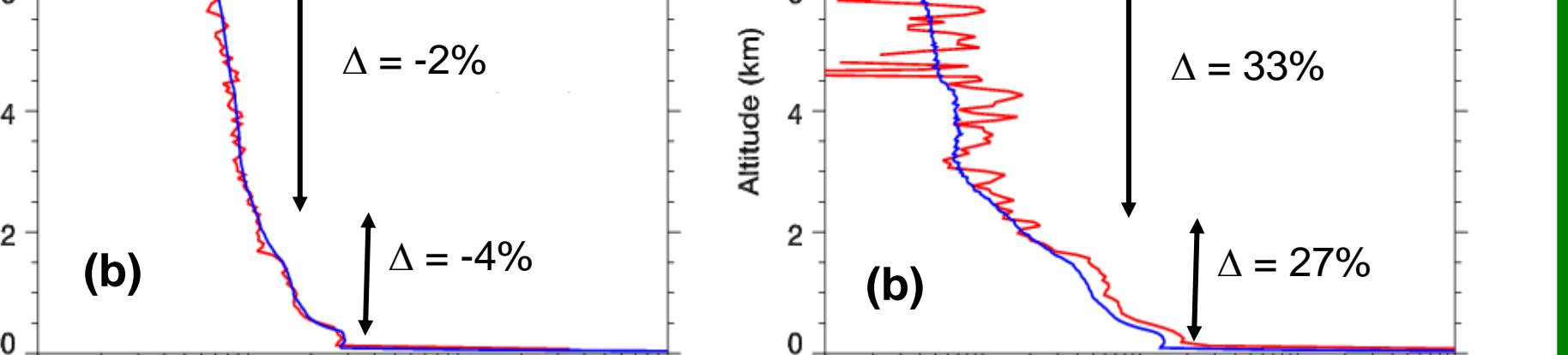
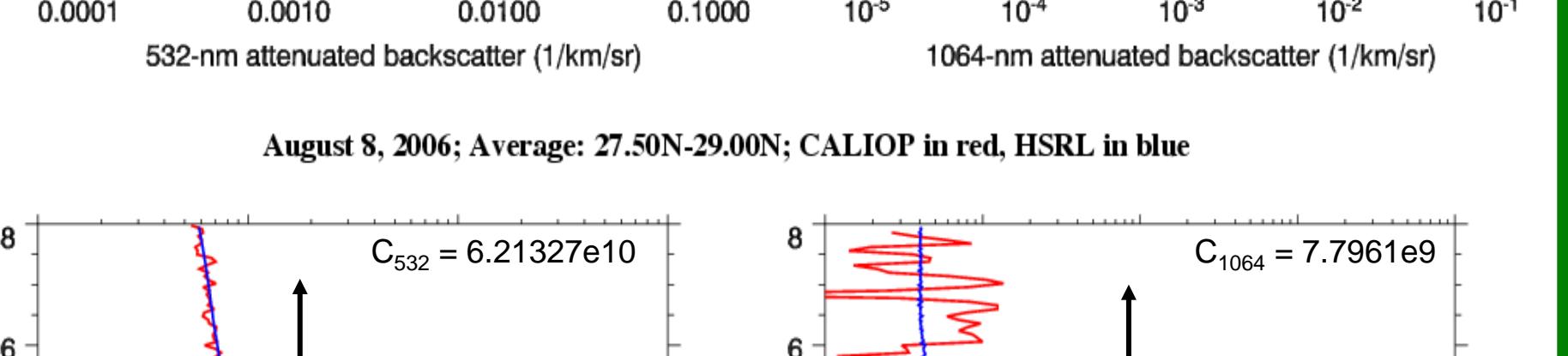
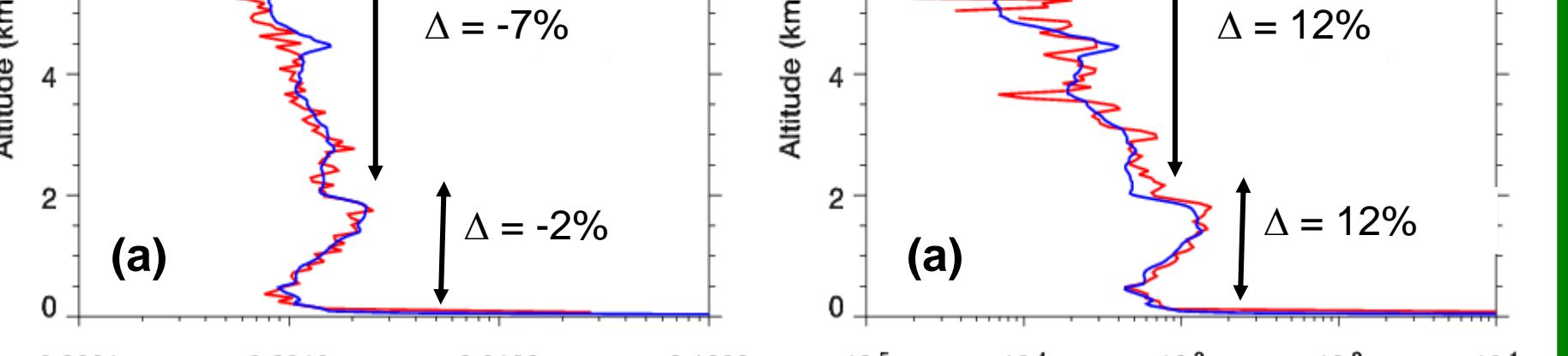
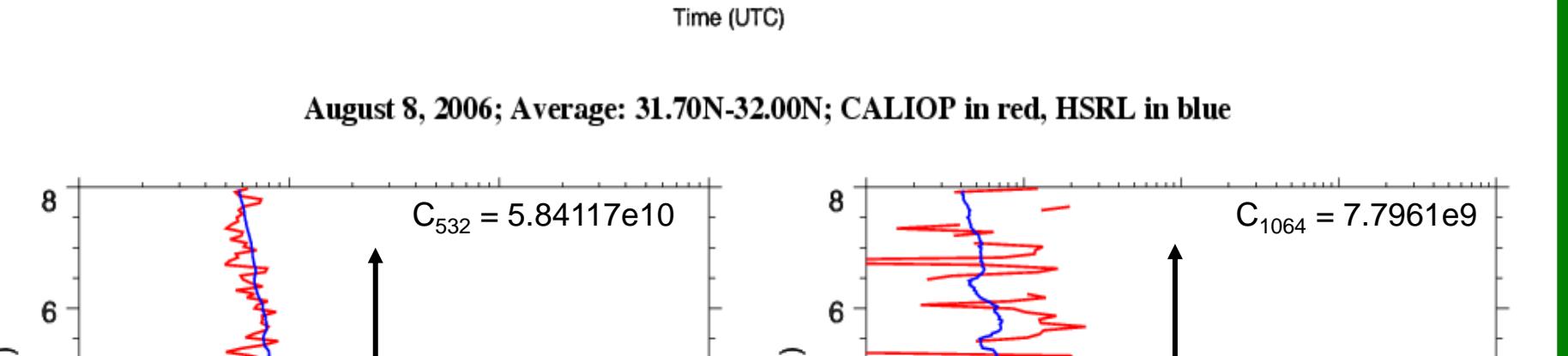
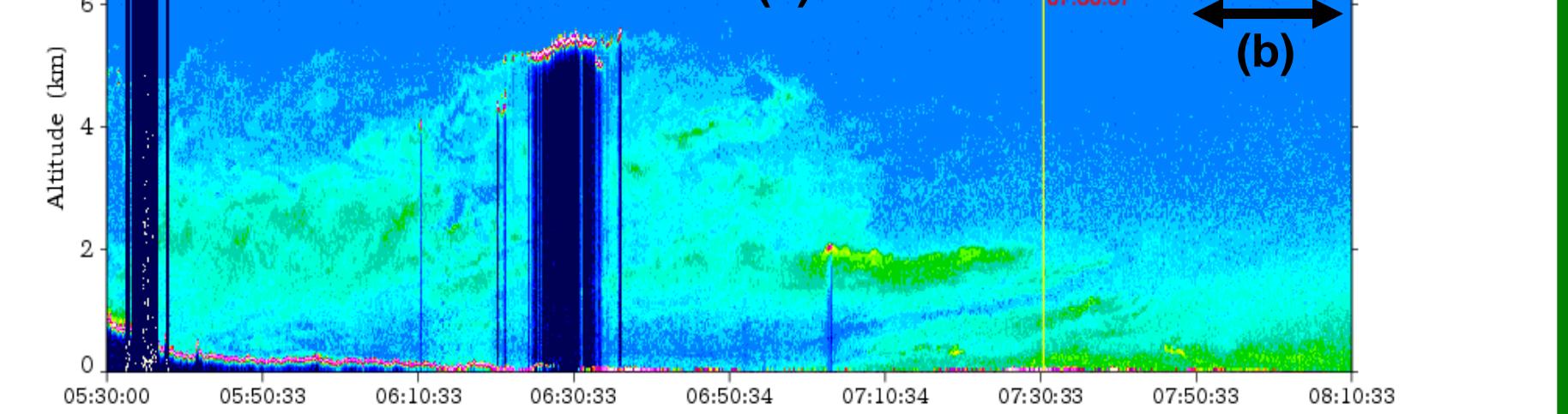
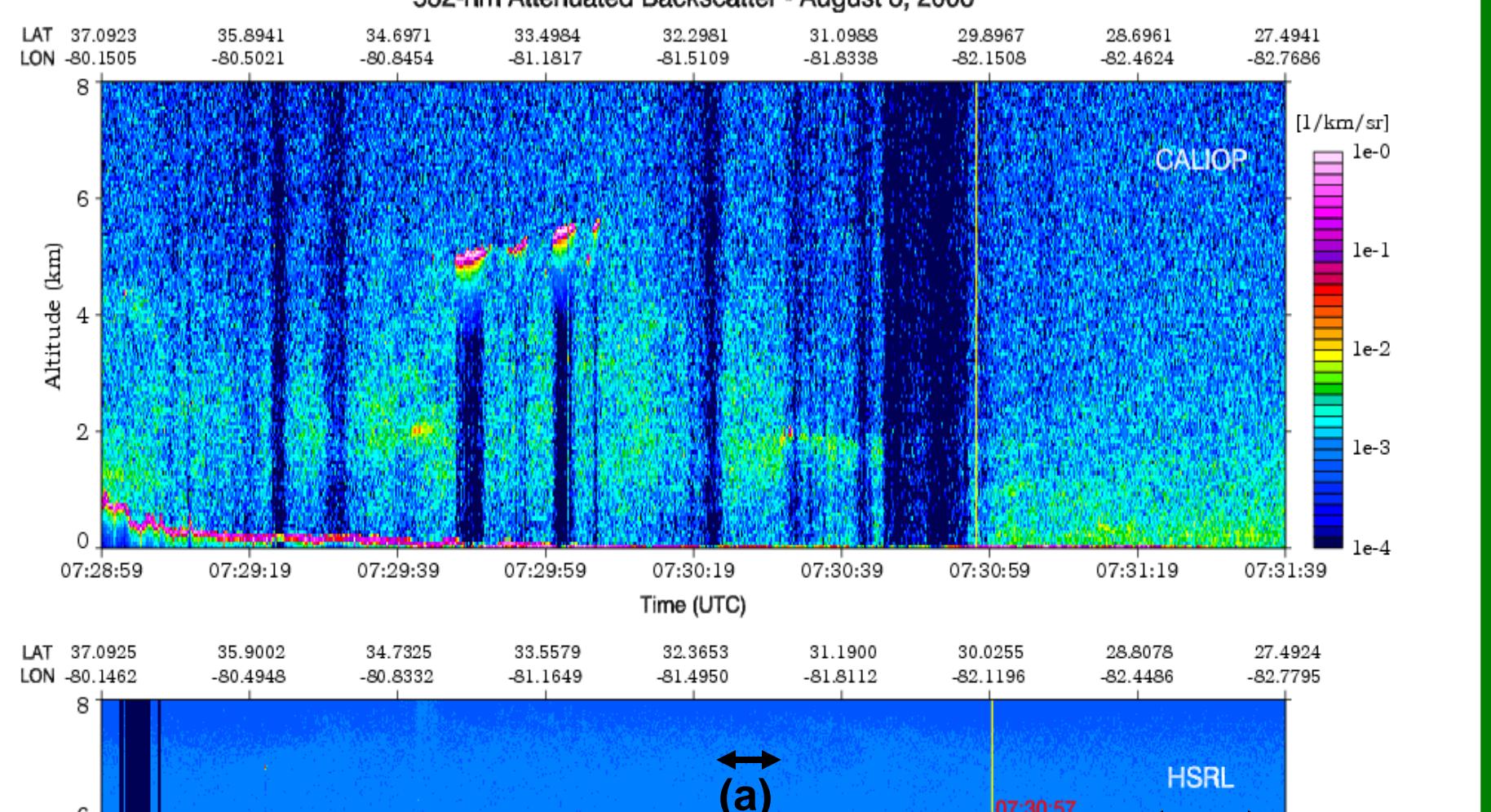
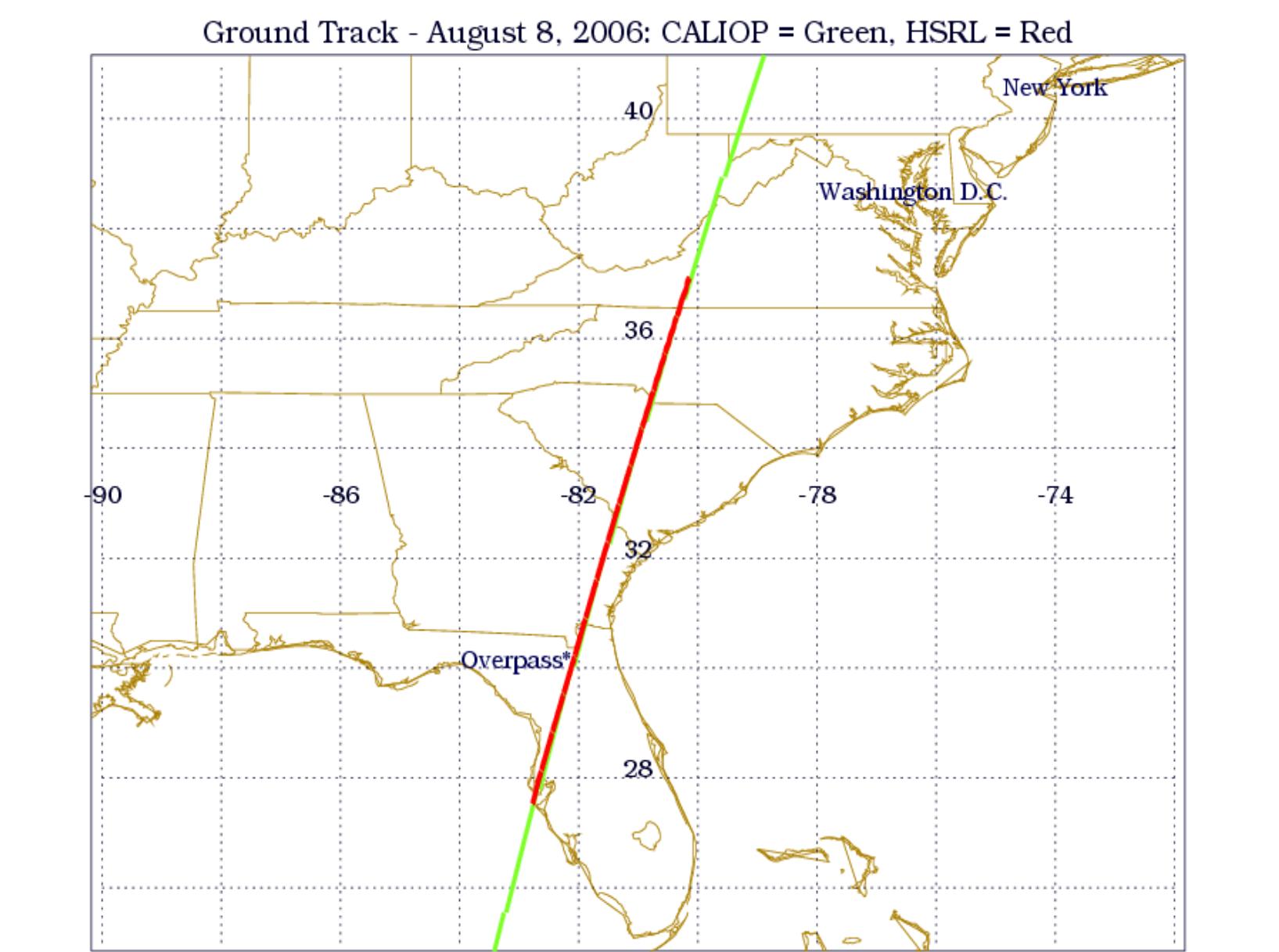
## Validation Methodology



## 8 August 2006 Nighttime Comparison



## 10 August 2006 Nighttime Comparison



## 2 August 2006 Daytime Comparison

